

Water Management to Improve Productivity and Protect Water Quality

ARS LOCATION:

Water Management Unit
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PRINCIPAL INVESTIGATORS:

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PROJECT OBJECTIVES:

1. Recommendations for sustainable water management in wine, table, raisin, and juice grape production using limited and impaired water supplies.
2. Recommendations for sustainable water and soil management to minimize the impacts of salinity on grape yield and quality.
3. Assessment of the effect of recommended water and salinity management strategies on quality, sensory, and yield parameters for table, raisin, juice, and wine grapes and their commercial products.
4. Development and expansion of commercially available grapevine rootstocks that better resist drought and tolerate salinity.
5. Quantification of the economic sustainability of implementing the strategies in deliverables 1, 2, and 4 in viticulture.
6. Outreach, extension, and educational training to disseminate recommendations to grower and academic audiences via presentations, publications, web-based learning and tailgate outreach.

MAJOR ACCOMPLISHMENTS (2009-2010):

Initial water management studies:

Proposed deficit irrigation strategies were used during the 2009 irrigation season on the J. Lohr vineyards in Paso Robles. Initial studies determined that the proposed treatments could be further modified to provide additional water savings. As a result, the deficit irrigation strategies were modified and included in the project that was funded.

New funding:

This project was funded during the last funding cycle and there are no results to report.

TECHNOLOGY TRANSFER/OUTREACH:

The NGWI website has hosted a page that describes the SCRI project that was funded. The URL is: www.ngwi.org/index.php?page_id=230.

EXTERNAL SUPPORT:

J. Lohr Vineyards and Wines; E. J. Gallo; Sun Maid Growers of California; California Table Grape Commission; National Grape and Wine Initiative; and Airfield Ranch.

COLLABORATORS:

Nick Dokoozlian, E.J. Gallo, Modesto, CA; Gwen-Alyn Hoheisel, Washington State University, Prosser, WA; Ross Jones, California Table Grape Commission, Fresno, CA; Clive Kaiser, Oregon State University, Milton-Freewater, OR; Jerry Lohr, J. Lohr, Vineyards and Wines, Paso Robles, CA; Jean-Mari Peltier, National Grape and Wine Initiative, Sacramento, CA; Michael Miller, Airfield Ranch, Sunnyside, WA; Anji Perry, J. Lohr Vineyards and Wines, Paso Robles, CA; and Rick Stark, Sun-Maid Growers of California, Kingsburg, CA.

RECENT PUBLICATIONS:

N/A, This project was funded in FY 2010 and research has not begun.